

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 09330816  
PUBLICATION DATE : 22-12-97

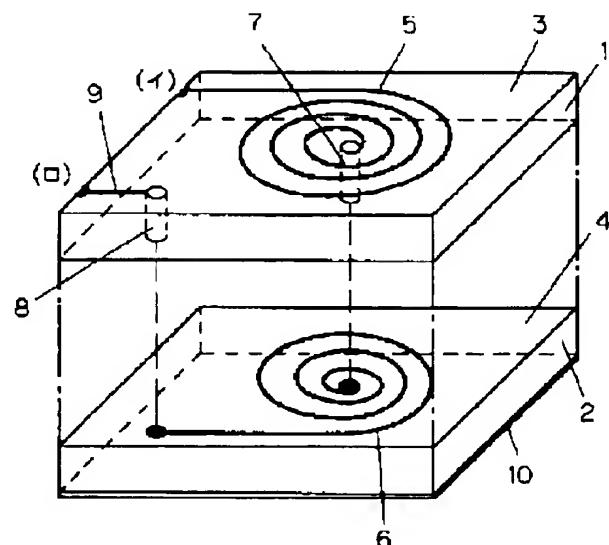
APPLICATION DATE : 11-06-96  
APPLICATION NUMBER : 08148804

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INT.CL. : H01F 17/00 H01F 19/00

TITLE : INDUCTOR ELEMENT,  
TRANSFORMER ELEMENT, AND  
BALUN ELEMENT



ABSTRACT : PROBLEM TO BE SOLVED: To obtain a large inductance value with a small area by connecting the inner end of a coil pattern formed on one conductor layer to the inner end of a reversely wound coil pattern formed on another conductor layer through a through hole.

SOLUTION: A substrate is constituted of a multilayer substrate containing three conductor layers. A first spiral coil pattern 5 is formed on the first conductor layer 3 and a second spiral coil pattern 6 is formed on the second conductor layer 4. The coil patterns 5 and 6 are wound in the opposite directions and formed at opposed positions. The inner ends of the patterns 5 and 6 are connected to each other through a through hole 7. The outer end of the pattern 6 is connected to a wiring pattern 9 formed on the first conductor layer 3 through a through hole 8.

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